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THE INSTITUTE OF CHARTERED ACCOUNTANTS OF PAKISTAN

Intermediate Examinations Spring 2006

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COST ACCOUNTING

(MARKS 100)

Module D

(3 hours)

Q.1 (a) An important feature in the installation of any accounting or costing system is the proper classification of accounts. The Bottlers Limited, bottlers and distributors of beverages, have recently introduced a new classification which includes the following accounts:

1. Samples
2. Sugar
3. Factory payroll
4. Foreman's salary
5. Conveyance and travelling
6. Factory's clerical salaries
7. Drivers' wages
8. Gas, oil and grease
9. Depreciation of furniture & fixtures
10. Salesmen's salary and commissions
11. Light and power
12. Legal and audit fee
13. Freight out
14. Income tax
15. Advertising
16. Rent of office building
17. Labels
18. Depreciation on machinery
19. Insurance
20. Water
21. Truck tyres
22. Bottle breakages
23. Telephone and communication
24. Stationery

Classify each account under one or more of the following headings:

- Manufacturing
- Selling and Distribution
- Administration **(06)**

(b) Distinguish between joint products and by-products, and briefly explain the difference in accounting treatment between them. **(04)**

Q.2 Eastern Limited purchases product Shine for resale. The annual demand is 10,000 units which is spread evenly over the year. The cost per unit is Rs. 160. Ordering costs are Rs. 800 per order. The suppliers of Shine are now offering quantity discounts for large orders as follows:

Ordered Quantity	Unit price Rs.
Upto 999 units	160.00
1000 to 1999 units	158.40
2000 or more units	156.80

The purchasing manager feels that full advantage should be taken of discounts and purchases should be made at Rs. 156.80 per unit, using orders for 2000 units or more. Holding costs for Shine are calculated at Rs. 64 per unit per year, and this figure will not be altered by any change in the purchase price per unit

Required:

Advise Eastern Limited about the best choice available to them. **(10)**

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Q.3 Mr. Azad has provided you the following information from his factory ledger for the quarter ended 31 December 2005:

Control Account Balances as on October 1, 2005:	**Rupees**
Materials	49,500
Work in process	60,100
Finished goods	115,400
Materials purchased	108,000
Direct wages	50,200
Payments for factory overheads	30,900
Depreciation of factory building and machines	42,000

Other related information is as under:

- Closing stock of raw materials and finished goods at December 31, 2005 amounted to Rs. 50,300 and Rs. 125,800 respectively.
- Cost of goods produced is Rs. 222,500.
- Factory overheads are absorbed in production @ 160% of direct wages.
- Diesel costing Rs. 2,000 included in the factory overheads was transferred to head office for use in generator.
- A bill for repairs amounting to Rs. 12,000 undertaken at the factory remained unpaid at the end of the quarter.
- Material costing Rs. 2,400 was destroyed by rain.

Required:

Write up the following accounts:

i) Materials
ii) Work in process
iii) Finished goods
iv) Factory overheads
v) Cost of goods sold **(10)**

Q.4 AG Electronics manufactures transistors which are used for assembling flat screen TV. During the current year 5,000 transistors were manufactured at the following costs:

	Rupees
Direct material	1,000,000
Direct wages	560,000
Factory overheads:	
Lease rentals – equipments	90,000
Equipments Insurance	19,000
Equipments maintenance contract	200,000
Other overheads	600,000

The cost of direct materials include abnormal loss of Rs. 30,000.

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The following estimates have been made for the next year:

1. The production is estimated to increase by 60%.
2. The cost of direct material will increase by 20%.
3. In view of a government regulation which will become effective from July 1, next year, the rate of wages will increase by 12%.
4. The rate of other overheads is expected to increase by 6% from the start of next year. 40% of the other overheads are fixed costs allocated by head office.

Moon Limited, a specialist in manufacturing transistors has offered to supply the full requirement for the next year, at a price of Rs. 400 per unit. If it is decided to discontinue the production of transistors, the plant currently in use would be returned to the leasing company but the following additional costs would have to be incurred:

Inspection	Rs. 20,000 per annum
Insurance	Rs. 8 per transistor

You are required to advise the company's management whether it should accept the offer of Moon Limited or continue to manufacture the transistors in-house. **(10)**

Q.5 The manufacturing of a chemical is carried out in three continuous processes, P1, P2 and P3. The following data is available in respect of production during February 2006.

Particulars	**P1**	**P2**	**P3**
Output – litres	8,800	8,400	7,000
Costs in rupees:			
Direct Material introduced (10,000 litres)	63,840	-	-
Direct wages	5,000	6,000	10,000
Direct Expenses	4,000	6,200	4,080
Work in process – opening (litres)	200		
Scrap value (Rs. per unit)	1	3	5
Normal loss	10%	5%	10%

At the end of P3, 420 litres of a by-product ZOLO were produced, which was treated further at a cost of Rs. 2 per liter. Selling and distribution expenses of Re.1 per unit were incurred and it was sold at a price of Rs. 9 per litre.

Budgeted overheads for the month were Rs. 84,000. Factory overhead absorption is based on a percentage of direct wages. The work in process at P1 comprised material of Rs. 500 and labour and factory overheads of Rs. 1,000. There were no closing work in process in any of the processes.

Required:

Prepare the following:

(a) Work in process account for each process.
(b) By-product account. **(12)**

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Q.6 Nasib Ltd. has prepared the following budgeted income statement for the year 2006:

Product	Caps	Crowns	Rings	Pallets	Tubes	Total
			(Rupees in	thousands)		
Sales	30,800	34,300	45,500	35,700	63,700	210,000
Manufacturing costs						
Materials	1,540	4,620	9,240	7,700	11,550	34,650
Labour	3,500	5,600	10,500	9,800	12,600	42,000
Production overheads:						
Variable	1,750	2,450	2,800	3,500	5,040	15,540
Fixed	2,450	4,200	7,700	7,000	6,650	28,000
	9,240	**16,870**	**30,240**	**28,000**	**35,840**	**120,190**
Transportation	840	2,520	5,040	4,200	4,550	17,150
Packaging	1,400	700	1,400	700	2,100	6,300
	2,240	**3,220**	**6,440**	**4.900**	**6,650**	**23,450**
Administrative costs	4,620	5,145	6,825	5,355	9,555	31,500
Selling and advertising expenses	5,040	3,815	3,675	3,885	5,285	21,700
Total cost	**21,140**	**29,050**	**47,180**	**42,140**	**57,330**	**196,840**
Profit	**9,660**	**5,250**	**(1,680)**	**(6,440)**	**6,370**	**13,160**

The Management Accountant of the company has provided the following additional information which describes the basis on which budgeted income statement has been prepared:

(i) Material costs include purchase cost plus 10% additional charge, which is added in order to recover the fixed costs of storage and stores administration.

(ii) Labour cost is totally variable.

(iii) Fixed production overhead includes both directly attributable fixed costs and general fixed production overheads. The general fixed production overheads amount to Rs. 21 million and have been allocated in proportion to labour costs. The attributable fixed cost is avoidable if the related product is not produced.

(iv) Transport charges include fixed costs of Rs. 3,150,000 which have been allocated to products in proportion to their material costs. Remaining costs are variable.

(v) Selling and advertising expenses include commission of 5% of sales revenue. The remaining amount is the advertising cost which is directly attributable to each product.

(vi) Administrative cost is fixed and is apportioned in the ratio of sales revenue.

(vii) Packaging is a variable cost.

The Managing Director has shown his concern that Rings and Pallets are showing loss and affecting the financial results of the company. A study which has been carried out recently has analyzed as under:

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(a) Sales are influenced by advertising and can be increased upto 40% by extensive advertising. However each 10% increase in sale would require a 75% increase in advertising expenditure.

(b) The sale of Caps or Crowns can be increased by reducing the production/sale of the product Ring. However a reduction in sale of Ring by Re.1 would generate a sale of 45 paisas of Caps or 50 paisas of Crowns sales. This substitution will not entail any extra advertising expenditure.

The management is considering the following three options:

(i) To discontinue the product Ring and Pallets.
(ii) To launch an advertising campaign which will increase the sale of each product by 40%.
(iii) To substitute the sale of Rings with the sale of Caps or Crowns.

Required:

Calculate the effect of each of the above options on the profitability of the company. **(25)**

Q.7 A company produces mineral water. Based on the projected annual sales of 40,000 bottles of mineral water, cost studies have produced the following estimates:

	Total annual costs (in rupees)	Variable cost percentage
Material	193,600	100
Labor	90,000	70
Overhead	80,000	64
Administration	30,000	30

The production will be sold through dealers who would receive a commission of 8% of sale price.

Required:

(i) Compute the sale price per bottle which will enable management to realize a profit of 10 percent of sales.
(ii) Calculate the break-even point in rupees if sale price is fixed at Rs. 11 per bottle. **(10)**

Q.8 The standard raw material mix for 2200 kgs of finished product is as follows:

Materials	**Weight (Kgs)**	**Price per Kg (Rs.)**
Salt	1,200	1.50
Ash	600	2.00
Coata	200	3.00
Fog	400	4.00

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Materials used during an accounting period were as follows:

Materials	Weight (Kg)	Price per Kg (Rs.)
Salt	6,000	1.6
Ash	4,800	1.8
Coata	1,600	2.6
Fog	2,500	4.1

Actual production was 12,100 kg. Calculate the following materials variances:

(i) Cost variance
(ii) Price variance
(iii) Usage variance
(iv) Mix variance
(v) Yield variance **(13)**

(THE END)

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